

Application No.: 09/824,397
Amendment Dated: August 27, 2004
Reply to Office Action of: May 27, 2004

MTS-3247US

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

- 1.-25. Cancelled).
26. (Currently Amended) An information display method comprising the steps of:
 - imaging and capturing an image of an object;
 - processing the image captured by said imaging step;
 - displaying prescribed information on a projection micro-display, separately obtained from the imaging step;
 - displaying a designated pointer on said display and controlling the pointer using only the same hand that holds the projection micro-display; and
 - controlling information on the display comprising the steps of:
 - (a) storing as a control input a sequential change, first (i) of a first hand pattern, formed of at least one finger, and then second (ii) of a second hand pattern, formed of at least one finger, the second hand pattern different from the first hand pattern;
 - (b) imaging, by the camera, the first hand pattern;
 - (c) imaging, by the camera, the second hand pattern;
 - (d) recognizing the first hand pattern imaged in step (b);
 - (e) recognizing the second hand pattern imaged in step (c);
 - (f) comparing a sequential change of first step (d) and then second step (e) to the stored control input; and

(g) controlling the information on the display, after the comparing of step (f-);

(h) positioning the display between an eye of a user and a hand of the user;

(i) viewing the at least one finger of the hand on the display, while forming the first and second hand patterns; and

(j) visually aligning the eye of the user, the display and the first and second hand patterns.

27. (Previously Presented) The information display method according to claim 26, wherein the image captured by said imaging step is a fingertip, a first hand pattern and a second hand pattern.

28. (Previously Presented) The information display method according to claim 26, wherein said display step makes said display surface be equal in size to a region within which said imaging step captures said image, or be smaller than said capture region.

29. (Previously Presented) The information display method according to claim 26, wherein said image processing step extracts a contour of said image, and

a position detecting step detects the position of said image on a screen from said extracted contour.

30. (Previously Presented) The information display method according to claim 26, wherein said image processing steps performs processing on portions of said image that are designated by a specific color and/or a specific temperature, and/or on portions of said image that lie within a focal length of said imaging means.

31. (Previously Presented) The control input method comprising:
the information display method according to anyone of claims 26 to 30; and
input step of carrying out a control input on an object pointed to by said designated pointer on said display surface.

32. (Previously Presented) The control input method according to claim 31, wherein said designated pointer is displayed by detecting a fingertip as said image.

33. (Previously Presented) The control input method according to claim 31, wherein said position detecting step compares the image captured by said imaging step or the image extracted by said image processing step with a plurality of image patterns corresponding to said control inputs respectively, and when said captured or extracted image matches any one of said image patterns, said input step carries out a control input that corresponds to said matched image pattern.

34. (Previously Presented) The control input method according to claim 31, wherein said position detecting step compares the images captured by said imaging step or the images extracted by said image processing step with a combination of a plurality of image patterns corresponding to one of said control input, and when said captured or extracted image match any one of said combination of image patterns, said input step carries out a control input that corresponds to said matched combination of image patterns.

35. (Previously Presented) The information display method according to any one of claims 26 to 30, wherein said display is used for a portable communication terminal or a portable telephone.

36. (Currently Amended) A portable telephone having a camera and a display, a method of controlling information on the display comprising the steps of:

(a) storing as a control input a sequential change, first (i) of a first hand pattern, formed of at least one finger, and then second (ii) of a second hand pattern, formed of at least one finger, the second hand pattern different from the first hand pattern;

(b) imaging, by the camera, the first hand pattern;

(c) imaging, by the camera, the second hand pattern;

(d) recognizing the first hand pattern imaged in step (b);

- (e) recognizing the second hand pattern imaged in step (c);
- (f) comparing a sequential change of first step (d) and then second step (e) to the stored control input; and
- (g) controlling the information on the display, after the comparing of step (f);
- (h) positioning the display between an eye of a user and a hand of the user;
- (i) viewing the at least one finger of the hand on the display, while forming the first and second hand patterns; and
- (j) visually aligning the eye of the user, the display and the first and second hand patterns.

37. (Previously Presented) The method of controlling information on the display of claim 36 wherein

- step (a) includes storing as a further control input a further sequential change first (i) of the second hand pattern, and then second (ii) of the first hand pattern;
- step (b) includes imaging another first hand pattern;
- step (c) includes imaging another second hand pattern;
- step (d) includes recognizing the other first hand pattern imaged in step (b);
- step (e) includes recognizing the other second hand pattern imaged in step (c);
- comparing a further sequential change of first step (e) and then second step (d) to the stored further control input; and
- controlling the information on the display, based on the further sequential change.

38. (Previously Presented) A portable telephone having a camera and a display, a method of controlling information on the display comprising the steps of:

- (a) storing as a control input a sequential change, first (i) of a first object forming a first pattern, and then second (ii) of a second object forming a second pattern, the second pattern different from the first pattern;
- (b) imaging, by the camera, the first pattern;
- (c) imaging, by the camera, the second pattern;
- (d) recognizing the first pattern imaged in step (b);
- (e) recognizing the second pattern imaged in step (c);
- (f) comparing a sequential change of the first step (d) and then the second step (e) to the stored control input; and
- (g) controlling the information on the display, after the comparing of step (f).

39. (Currently Amended) The method of controlling information on the display of any one of claims 36-38-37 wherein

controlling the information on the display includes controlling the information on a projection micro-display, and

superimposing a cursor on the display surface of the projection micro display to control the information;

the method further including:

visually observing both the cursor and the one finger forming the first hand pattern and the second hand pattern, and

moving both the cursor and the one finger imaged on the display to control the information on the display.

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40. (New) The method of controlling information on the display of claim 38 wherein

controlling the information on the display includes controlling the information on a projection micro-display, and

superimposing a cursor on the display surface of the projection micro display to control the information;

the method further including:

visually observing both the cursor and a hand/finger forming the first pattern and the second pattern, and

moving both the cursor and the hand/finger imaged on the display to control the information on the display.